UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/199,478	11/25/98	CHEN J	089048/167

WM01/0307

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EXAMINER	
TUNG,K	
ART UNIT	**PAPER NUMBER**
2671	2

DATE MAILED: 03/07/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No.	Applicant(s)	
	09/199,478	CHEN ET AL.	
	Examiner	Art Unit	
	Kee M Tung	2671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 November 1998* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15)☒ Notice of References Cited (PTO-892)
16)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
17)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
18)☐ Interview Summary (PTO-413) Paper No(s). _____ .
19)☐ Notice of Informal Patent Application (PTO-152)
20)☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kang (6,052,133) in view of Nally et al (5,748,968).

Kang teaches an integrated circuit device (Fig. 2, 111) for use in a computer system (Fig. 2) that includes a processing unit (116), a host bus (110) connected to the processing unit, an I/O bus (112) , a peripheral device (123) connected to the I/O bus, a monitor (123), and a system memory (122), said IC device comprising a core controller (host interface 142 or 262) adapted to be connected to the host bus; a bus bridge (264) connected to said core controller and adapted to be connected to the I/O bus; a graphical controller (144) connected to said core controller and said bus bridge and adapted to be connected to the monitor; and a unified memory control unit (146) connected to said core controller and said graphical controller and adapted to be connected to the system memory. It is noted that Kang shows the multi-function controller 111 having two separate chips (Fig. 3, 114 and 120) which includes two host interfaces (142 and 262). However, Kang also suggests that the multi-function controller 111 can be a single chip or several chips (col. 3, lines 45-46). However, Kang fails to explicitly teach the unified memory controller

unit including a graphical memory address/data path; a system memory address/data path; a centralized memory arbiter; and a unified memory controller. This is what Nally et al teaches. Nally et al teaches a graphical memory address/data path (connected to element 108); a system memory address/data path (connected to element 106); a centralized memory arbiter (110); and a unified memory controller (112). It would have been obvious to one of ordinary skill in the art at the time the present invention was made to combine the teachings of Nally et al into the system of Kang in order to more efficiently allocate the memory bandwidth requirements as taught by Nally et al (col. 2, lines 26-33). Therefore, at least claims 1 and 2 would have been obvious.

As per claim 3, the teachings of three separate and concurrently operable internal buses that connect said graphical controller and a respective one of said core controller, said bus bridge and said unified memory control unit would have been obvious by the teachings of single chip multi-function controller of Kang in order to concurrently communicate with each component.

As per claim 4, the combined system fails to explicitly teach said internal buses run at the same clock domain as the host bus. It would have been obvious to one of ordinary skill in the art at the time the present invention was made to provide the same clock domain for both internal buses and the host bus in order to synchronize the data transfer operations.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-7 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-9 of copending Application No. 09/199,270. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims would have been obvious to one of ordinary skill in the art at the time of invention.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kee M Tung whose telephone number is 703-305-9660. The examiner can normally be reached on Tuesday - Friday from 6:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Zimmerman can be reached on 703-305-9798. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-9051 for regular communications and 703-308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

Kee M Tung
Primary Examiner
Art Unit 2671

kmt
March 5, 2001